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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/28/2001

Tom E. Pearson

2165

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EXAMINER

ARBES, CARL J

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 07/17/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

1-612-339/3061

Attorney Anne McCrackin

Office Action Summary

Application No.

09/964,746

Applicant(s)

PEARSON ET AL.

Examiner

C. J. Arbes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 27-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 31-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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In response to Applicants' Remarks filed on or about 12 May 2003 it is submitted that the Office's Restriction mailed on or about 23 April 2003 is proper and is correct. Applicants urge essentially that there would not be a sufficient burden on the Patent Office if in fact the office considered all of the claims in this Application. This is not the sole criterion for proper Office Restriction. Moreover the Examiner who works day in and day out in the field wherein this Examination is carried out is in a much more favorable position to assess the criteria of whether there is a serious burden on the Office with the facts of this or any other Application which is classified in this class. In the instant case the Restriction made is able to support 2 distinct patents. Such reasons were duly provided in Paper No. 5 mailed on or about 23 April 2003. In response to Applicant's position that there is an undue burden on Applicants (Cf. page 4 of Applicants' Amendment perhaps Applicant can persuade Applicants to file claims to separate inventions in separate Applications or perhaps Applicants' attorney can draft claims so that the Groups of claims cannot be properly restricted.

The Restriction is now made Final.

Applicants are therefore required to cancel Claims 27-30 (all of which Claims are non-elected) or take other appropriate action.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 2, 6, 7-10, 12, 14-17, 19, as understood, 21 as understood and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Tadauchi et al.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 11, 13, 18, 20, 22, as understood, 24-26 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadauchi et al.

Tadauchi et al teach a soldering method wherein a binary solder consisting of an eutectic alloy of tin and another metal, exclusive of lead) is prepared. The content of the other metallic components is 0.1% (by weight). The binary alloy is dispensed onto a base material which can be a PCB (Cf. Col. 8) with a pad (Cf. Claim 7). One observes that when Pb is present in the alloy a film of Lead Oxide is formed so that when the solder is placed onto a substrate the Lead-containing solder will flow relatively easily. Whereas when there is a Tin-Zinc there is a stronger film formed and this film hinders molten solder from contacting the base material. (Cf. Col. 5) It would have been obvious to place solder through at least one stencil aperture and onto a pad of a PCB since this is old and hence obvious in this art. The limitations recited in Claims 4, 5, 13, 18 are held to be mere design choice inasmuch as these limitations solve no specific problem nor are for any specific purpose.

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In response to Applicants' argument that Tadauchi et al do not teach the limitation ... visual appearance of a heated predetermined pattern being indicative of whether solder is lead free...(Cf. page 6 of Applicants' Amendment), Tadauchi et al cannot be clearer that a Lead film gives a different type of film than another e.g. Zinc solder. A leaded solder is relatively thin compared to a non-leaded solder. Anyone skilled in the art can visually see the difference. It is crystal clear that Applicants would paint the picture that one of ordinary skill in this art is of minimum intelligence and training with respect to observing the differences on a Leaded solder *viv-a-vis* a non-leaded solder. If Applicants persist in their argument that Tadauchi et al do not anticipate or make obvious the claimed invention, Applicants are requested to provide *inter alia* what they believe is the appropriate age, experience and training of the fictitious person of ordinary skill in this art. With respect to Applicants' argument re to claims 3 and 11 it is old to use stencil apertures to cause solder to be placed onto surfaces on a PCB. With respect to the Office's allegedly failure to interpret the limitation recited in dependent Claim 7, it is believed that one of ordinary skill in the art would determine if indeed the solder was Lead free and would compare the solder pattern before and after heating. If the solder had lead in its composition the artisan would note the difference in film strength and viscosity and therefore and this would indeed be comparing the solder reflow before and after the soldering step. It is believed that Applicants will nor or do not appreciate the content of the Tadauchi et al teaching and/or the ability, training and experience of the artisan in this art.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to C. J. Arbes at telephone number (703) 308-1857.


CARL J. ARBES
PRIMARY EXAMINER